

ABSTRACT OF THE DISCLOSURE

2 An object is authenticated by transmitting a random number to the object. The
3 object has an integrated circuit chip including a memory and encryption circuitry. The
4 memory stores information defining an encryption scheme preassigned to the object. The
5 encryption circuitry reads the memory, and encrypts the random number according to the
6 encryption scheme defined by the information read from the memory to produce
7 encrypted data. The memory cannot be read from any output of the integrated chip, and
8 the chip is constructed so that it is virtually impossible to recover the information
9 contained in the memory by visual inspection, probing, or disassembly of the chip. The
10 object is authenticated by checking whether the encrypted data is a correct result of
11 encrypting the data using the encryption scheme preassigned to the object.